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SOIL PREFERENCES OF SCROPHULARIACEAE

BY FRANCIS W. PENNELL

Fifteen times during the course of my series of articles on the "Scrophulariaceae of the Local Flora," which appeared in *TORREYA* during 1919, have I made the same mistake—an error which to a person with a chemical knowledge of soils may appear glaring. One correction will serve for all: for "potassic soil" read "non-calcareous and non-magnesian soil."

It is easy for those of us who are interested in plant-identity and plant-distribution to realize that for each species there is a soil of optimum chemical composition as well as one of optimum physical composition. The writer's first original scientific study was an analysis of the flora of the Serpentine Barrens of extreme southeastern Pennsylvania, and there, on soil identical in texture with that of other barren hills of the section, the Serpentine would present invariably its definite alliance of inter-growing species—certainly the obvious explanation was the presence in the soil of magnesium as a preponderant element. With nearly equal sharpness one may denote the species growing upon soils with calcium as the main determining element. Other soils may not so readily be disposed into like groups, yet the remaining aggregate possesses so much in common that for it, and especially—most wrongly—for a pronounced part of it, "acid soils," have I used the term "potassic."

My present word of correction would emphasize the importance of our local workers' studying the problem of soil-preferences of plants, and giving us just the information which my papers intended to give. The ideal Local Flora of the future will present a classification of the flora into sub-floras and associations, accounting for the distinctness of each type; also it must give

us an account of each species, surely with less attention to its nomenclature and history than the formative state of our science now makes desirable, but rather telling of its life—of its “preference” with respect to food, to texture of soil, to moisture, to light, of its manner of pollination, of its range—both portraying and explaining this—and adding yet much more to that wealth of information which an observational field-botany should make ours.

Soil-chemistry is too fundamental for plant-distribution for me to feel that this misstatement really deserves the pardon for which I am asking.

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BOOK REVIEWS

Murrill's Nature Books*

These three books complete the set of nature and character books published by Dr. Murrill during the past year, making a total of about 1,000 pages of text, 129 halftones, and 5 colored plates. The first of the series was reviewed in *TORREYA* for November, 1918.

In all these volumes, which are largely autobiographic, the author seeks to educate and inspire both young and old in a pleasing, indirect way that is quite original.

“The Naturalist in a Boarding School” contains the author's experiences while teaching at Bowling Green and Staunton, Virginia; short essays on various subjects; a condensed guide to bodily and mental health, character training, original epigrams and maxims on a great variety of subjects, and classified quotations from the best literature relating to man; the latter feature consisting of quotations reaching from Epictetus to Emerson and beyond—over 100 pages!

“The Natural History of Staunton” contains many original observations on all phases of natural history—beasts, birds, trees, flowers, rocks, etc.—with colored figures of the more common butterflies and a list of nature quotations.

* “The Three Young Crusoes.” “The Naturalist in a Boarding School.” “The Natural History of Staunton, Virginia.” Written and for sale by William Alphonso Murrill, Bronxwood Park, New York, \$1.50 per volume, postpaid.